

## PURE TUNGSTEN WF-3 Foil 4201

**Description of Product** This specification covers rolled tungsten foil, from 0.002 through 0.0049 thick, produced from pressed and sintered powder metallurgy sheet bar.

### Chemical Characteristics<sup>1)</sup> (Mass fraction in % [cg/g]; ppm [ $\mu$ g/g])

The chemical composition of the tungsten powder used in producing the sheet bar shall conform to the following limits:

Tungsten (By Difference)	min.	99.95	%
Al	max.	0.002	%
Cr	max.	0.002	%
Cu	max.	0.002	%
Mg	max.	0.002	%
Mn	max.	0.002	%
Pb	max.	0.002	%
Si	max.	0.002	%
Sn	max.	0.002	%
Ti	max.	0.002	%
Ca	max.	0.003	%
Fe	max.	0.003	%
Ni	max.	0.003	%
C	max.	0.005	%

**Structure** Foil is supplied in the as-rolled condition. Stress-relieved material can be supplied upon request.



WF-3

1) Information on testing methods on request.

**Physical Characteristics**

**Thickness Tolerance:**

Thickness (Inches)	Available Tolerance	Width (Inches)
0.002	± 0.0003	250 to 6
0.003	± 0.0004	250 to 12
0.004	± 0.0005	250 to 12
0.0049	± 0.0007	250 to 12

Tolerance for intermediate thickness will correspond to next heavier thickness shown.

**Width Tolerance:**

THICKNESS (INCHES)	SLIT WIDTH (INCHES)		SHEARED WIDTH (INCHES)
	OVER .500 THRU 6 INCHES WIDE	OVER 6 THRU 12 INCHES WIDE	OVER .500 THRU 12 INCHES WIDE
0.002 to 0.049	± .010	± .015	± .031

**Length Tolerance** For specific lengths, tolerance is + .0625 - 0 inch per foot of length. Tungsten foil is supplied in a coil having a minimum internal diameter of 3 inches, with a minimum coil length of 10 feet.

**Surface Condition** Foil will have a bright finish and will be essentially free of surface defects or edge delaminations as determined by visual examination. Special mirror finish material is available upon request.

**Hazards identification in Advertising (Directive 67/548/EEC Article 26, Directive 1999/45/EC Article 13 and REGULATION (EC) No 1272/2008 Article 48)**  
 none.

**Identification** The material will be identified with appropriate specification number, ingot or lot number, and nominal size. Shipping containers will be marked with the name of the customer and the purchase order number.

**Rejection** H.C. Starck must receive written notification of rejected material with the reason for rejection. The right is reserved to inspect rejected material at customer plant for claim validation. The material may be returned only after proper authorization.

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